Amendments to the Claims:

1-22. (cancelled)

23. (new) An intra-field interpolation device for converting an interlaced video signal to a de-interlaced video signal, the device comprising:

a first pixel difference unit receiving an image field of the interlaced video signal for determining a pair of pixel difference sets on either side of a normal axis of a target pixel in an alternate field of the interlaced video to thereby generate two candidate blending angles for the target pixel;

a second pixel difference unit receiving the image field for determining two reference pixel differences in the image field being along a reference angle on either side of the normal axis of the target pixel;

an angle selection unit being coupled to the first pixel difference unit and the second pixel difference unit for determining an optimal blending angle according to the two candidate blending angles determined by the first pixel difference unit, and the two reference pixel differences determined by the second pixel difference unit; and

a weighted blending unit being coupled to the angle selection unit and receiving the image field for blending a plurality of pixel values in the image field along the optimal blending angle to thereby generate the target pixel in the de-interlaced video signal.

24. (new) The device of claim 23, further comprising a gradient unit receiving the image field for determining a gradient of a first line above the target pixel in the image field and a second line below the target pixel in the image field;

wherein the first pixel difference unit is for generating the two candidate blending angles for the target pixel further according to the gradient.

25. (new) The device of claim 23, wherein the second pixel difference unit is for determining the two reference pixel differences being along a 45 degree reference angle on either side of the normal axis of the target pixel.

26. (new) The device of claim 23, wherein the angle selection unit includes an angle voting unit for determining the optimal blending angle further according to two previously utilized blending angles; wherein the two previously utilized blending angles correspond to blending angles for two previous pixels that were interpolated prior to the target pixel.

27. (new) The device of claim 23, wherein the weighted blending unit is for performing weighted blending of a plurality of pixels values further along the normal axis to generate the target pixel.

28. (new) The device of claim 27, wherein the weighted blending unit is for performing a two-phase weighting algorithm to interpolate the target pixel; pixel information along the normal axis being weighted according to a first weight, and pixel information along the optimal axis being weighted according to a second weight.

29. (new) The device of claim 23, further comprising a low-pass filter for removing noise from the interlaced video signal.

30. (new) The device of claim 23, wherein the first pixel difference unit is for utilizing a first pixel difference algorithm being substantially different from a second pixel

difference algorithm utilized by the second pixel difference unit.

31. (new) A intra-field interpolation method of converting an interlaced video signal to a de-interlaced video signal, the method comprising:

receiving an image field of the interlaced video signal;

determining a pair of pixel difference sets on either side of a normal axis of a target pixel in an alternate field of the interlaced video to thereby generate two candidate blending angles for the target pixel;

determining two reference pixel differences in the image field being along a reference angle on either side of the normal axis of the target pixel;

determining an optimal blending angle according to the two candidate blending angles and the two reference pixel differences; and

blending a plurality of pixel values in the image field along the optimal blending angle to thereby generate the target pixel in the de-interlaced video signal.

32. (new) The method of claim 31, further comprising:

determining a gradient of a first line above the target pixel in the image field and a second line below the target pixel in the image field; and

generating the two candidate blending angles for the target pixel further according to the gradient.

33. (new) The method of claim 31, further comprising determining the two reference pixel differences being along a 45 degree reference angle on either side of the normal axis of the target pixel.

34. (new) The method of claim 31, further comprising determining the optimal blending angle further according to two previously utilized blending angles; wherein the two previously utilized blending angles correspond to blending angles for two previous pixels that were interpolated prior to the target pixel.

35. (new) The method of claim 31, further comprising performing weighted blending of a plurality of pixels values further along the normal axis to generate the target pixel.

36. (new) The method of claim 35, further comprising performing a two-phase weighting algorithm to interpolate the target pixel; pixel information along the normal axis being weighted according to a first weight, and pixel information along the optimal axis being weighted according to a second weight.

37. (new) The method of claim 31, further comprising removing noise from the interlaced video signal.

38. (new) The method of claim 31, further comprising utilizing a first pixel difference algorithm to determine the pair of pixel difference sets being substantially different from a second pixel difference algorithm utilized to determine the two reference pixel differences.